

### **REMARKS/ARGUMENTS**

Claims 1-58 are pending and under examination in the application. The rejection of claims 1-58 for obviousness was maintained in the final office action dated June 5, 2007.

Applicants point out that on page 5, the final Office Action states that the "instant claims differ only in screening methods for primary hydroxylamines". Applicants note that the claims under examination are drawn to pharmaceutical compositions and methods using the claimed compositions, not screening methods.

Further, the Examiner did not address Applicants' arguments relating to the superior properties of the claimed pharmaceutical compositions, which were presented in the section "Primary N-hydroxylamines exhibit superior properties", beginning on page 15 of Applicants' response dated October 12, 2006. The October 12, 2006 response was a reply to a nonfinal Office Action. Applicants therefore respectfully request that the Examiner consider those remarks. For convenience, the remarks are summarized below.

In response to Applicants' evidence in the specification that the compositions have superior properties, the previous Examiner had alleged that the unexpected ability of primary N-hydroxylamines to delay senescence was not sufficient to lend patentability to the claims. In particular, the previous Examiner cited *In re Payne* 203 USPQ 245 (CCPA 1979); *In re Wiseman* 201 USPQ 658 (CCPA), and *Ex parte Obiaya* 227 USPQ 58 (Bd. Pat. App. & Int.) in support of his arguments. Applicants respectfully disagreed.

Cyclic-N-hydroxylamines ( $R_2NOH$ ) and their respective nitroxides protect against oxidative damage induced by  $H_2O_2$ , but do not delay cellular senescence. Primary N-hydroxylamines, however, have the superior property of delaying senescence, as taught in the specification, e.g., on page 46, lines 2-7; and page 48, lines 18-24; and page 49, lines 7-11. The facts here distinguish the present application from the cases cited by the Examiner.

In *In re Payne*, the claims at issue are drawn to chemical compounds having particular structures. The CCPA concluded that the patent office had properly established that the claimed compounds were *prima facie* obvious. However, the court also considered Appellants' evidence of unexpected or superior properties to rebut the *prima facie* case ("A

*prima facie* case of obviousness based on structural similarity is rebuttable by proof that the claimed compounds possess unexpectedly advantageous or superior properties." *In re Payne* 245, 256, citing numerous cases). Although the court found that the Appellants' evidence was insufficient, as the claimed compounds were not tested against the closest prior art, that aspect of the analysis of surprising results is not at issue in the present application. The court in *Payne* clearly recognized the relevance of surprising results to patentability. Thus, *In re Payne* in fact supports that a compound that may be structurally obvious in view of the prior art can be patentable based on its unexpected properties.

In *In re Wiseman*, the CCPA considered Appellants' arguments that the patent office had not established a proper case of obviousness. The CCPA affirmed the Patent Office's finding that the claims were obvious, noting that there must be some evidence of record by way of affidavits or clear and persuasive assertion in the specification, that the fact relied on to support patentability was the discovery of the applicants. No issues relating to the rebuttal of a *prima facie* case of obviousness based on surprising results were considered.

In *Ex parte Obiaya*, the claimed invention related to a sensor containing a combustion fluid and oxygen concentration analyzer in which a fluid sample was drawn into the sensor apparatus and separated into two parts, one of which went to the oxygen analyzer, the other of which went to the combustion analyzer. A heater was employed to maintain the sample going to the combustion analyzer at a constant temperature to obtain uniform results. One of the issues considered by the Board was Appellants' evidence of an unexpected result, *i.e.*, that a shorter response time was obtained when a labyrinth heater was employed. The Board noted that the prior art references disclosing the labyrinth heater indicated that there was an advantage (*i.e.*, a first advantage) obtained by using such heaters in that the samples were maintained at a uniform temperature. The Board held that the fact that the appellant recognized another advantage that would flow naturally from following the suggestion in the prior art was not a basis for patentability. However, in the present case, the Examiner has not pointed to a first advantage that the claimed compositions would allegedly have over the prior art. Again assuming *arguendo* that pharmaceutical compositions comprising primary N-hydroxylamines are obvious, as alleged by the Examiner, such compositions would be simple alternatives to the

prior art secondary hydroxylamine compositions. Thus, there is no "first" advantage (over the prior art) in pharmaceutical compositions comprising primary N-hydroxyl amines from which a second advantage (in this case, the ability to delay senescence) would naturally flow. Accordingly, the reasoning of the Board in *Obiaya* does not apply here.

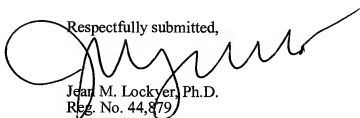
The law is clear that a *prima facie* case of obviousness based on structural similarity is rebuttable by proof that the claimed compounds possess unexpectedly advantageous or superior properties *In re Papesch*, 315 F.2d281, 137 USPA43 (CCPA 1953). Further, evidence that the compound or composition possesses superior and unexpected properties in one of a spectrum of common properties can be sufficient to rebut a *prima facie* case of obviousness (MPEP § 2144.08.II.B, citing *In re Chupp*, 816 F.2d 643, 2 USPQ2d 1437 (Fed. Cir. 1987)). Here, the facts are analogous to those of *In re Chupp*. Even though primary N-hydroxylamines may share common properties with secondary hydroxylamines, the remarkable results of the primary N-hydroxylamines in delaying senescence (compared to the lack of activity of secondary hydroxylamines in this regard) is sufficient to render the claims patentable.

In view of the foregoing, Applicants respectfully request withdrawal of the rejection.

Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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